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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,509	09/17/2003	Hisashi Tsukamoto	Q137-US9	5825

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EXAMINER

WALKER, KEITH D

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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12/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/665,509

Applicant(s)

TSUKAMOTO ET AL.

Examiner

Keith Walker

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 58, 59 and 66-87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 58, 59 and 66-87 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Remarks

Claims 58, 59 & 66-87 are pending examination as discussed below.

Information Disclosure Statement

The information disclosure statement filed on 9/17/07 has been placed in the application file and the information referred to therein has been considered as to the merits. The two references US 5,501,916 and US 5,755,759 are crossed out on the IDS since they were used as prior art in the rejections of the previous office action and therefore already considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 58, 59 & 66-87 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The subject matter "electrically conductive terminal pin being electrically insulated from the case" is critical or essential to the practice of the invention, but not included in the claim, is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). In the instant specification, the pin needs to be insulated from the case by dielectric disks (16, 18) and

a glass hollow cylinder (20) to prevent short-circuiting in the battery. See page 6, originally filed claim 58.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 58, 59, 70, 71, 84, 86 & 87 are rejected under 35 U.S.C. 102(e) as being anticipated by Teramoto et al. (US 5,501,916).

With respect to claims 58, 70, Teramoto et al. disclose a method of forming a lithium battery comprising arranging the positive electrode in electrical communication with a winding core (48) (pin), insulating the negative electrode from the core, spirally winding the electrode around the core, transporting the electrolyte through the opening of the battery case and sealing the opening with the battery lid (47). The winding core extends through an end cap (47) that is electrically insulated from the case (45). See Example 2 and Figure 9.

With respect to claim 59, Teramoto et al. disclose the electrolyte is injected into the case before the battery cap is sealed. See Example 2.

With respect to claim 71, the spiral wound electrodes includes a separator (43). See Example 2.

With respect to claim 84, Teramoto et al. teach the positive electrode is in electrical commutation with the terminal core via a weld (52). See Example 2.

With respect to claim 86, Teramoto et al. teach the end cap is caulked in position by an insulating gasket coated with asphalt. See Example 2.

With respect to claim 87, Teramoto et al. teach the use of a nickel-plated iron battery case. See Example 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 66 & 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,501,916 (Teramoto) as applied to claim 58 above and further in view of US Patent 6,399,242 (Kitoh).

The teachings of Teramoto as discussed above are incorporated herein. The electrode tabs are welded to the end caps (Fig. 1 & 2; 1:15-29).

Teramoto is silent to attaching a flat portion of the tab to an inner face of the second end cap, where the tab extends past a center point of the second end cap.

Kitoh teaches attaching a tab such that the flat portion of the tab is attached to the inner face of the second end cap, such that the tab extends past a center point of the second end cap (Fig. 2; 4:39-50). This configuration allows for the battery to have

excellent reliability and has low processing costs (Abstract). Furthermore, a reduction in the battery's internal resistance is realized (2:20-25).

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the tabs of Teramoto with the connecting tab locations taught by Kito to decrease the internal resistance of the battery and produce a reliable battery with lower production costs.

4. Claim 85 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teramoto et al. (US 5,501,916) as applied to claims 58, 59, 70, 71, 84, 86 & 87 above, and further in view of Cogan (US 5,755,759).

Teramoto et al. teach a method of forming a lithium battery as described above in Paragraph 7. However, Teramoto et al. do not disclose the use of Pt-Ir alloy as the pin.

Cogan teaches a biomedical device wherein the wire electrode is made of Pt-Ir alloy because it can record or stimulate physiological function. See Column 3, Lines 43-56.

Therefore, it would have been obvious to one of ordinary skill in the art to use Pt-Ir alloy as the pin onto the battery of Teramoto, because Cogan teaches the alloy can be used in implantable medical device.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 58, 59 & 66-87 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 66-91 of copending Application No. 10/666,379. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claim the process of forming a battery that will have to be hermetically sealed by the end cap to prevent the degradation of the electrodes and electrolyte.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicant's arguments filed 9/17/07 have been fully considered but they are not persuasive.

Applicant, in response to the rejection under 35 USC 112 first paragraph, argues that the "terminal pin being electrically insulated from the case" is not critical to the claims, as required by 35 USC 112 first paragraph. Regarding the arguments to claims 20-23, 26 and 27, these claims are cancelled. Applicant also argues originally filed claim 58 does not indicate this element is critical and therefore does not support the rejection under 112 first paragraph. The specification along with the original claims supports the criticality of the limitation. The instant disclosure teaches a pin attached to one electrode, where the pin is electrically conductive and is fed through a first end cap. The pin has an electrically insulating barrier of ceramic and glass separates the electrically conducting pin from the case. The second electrode is taught to be connected to the second end cap which is electrically conductive with the casing. As stated by the applicant on page 9 of the arguments, "the specification teaches that the 'battery case itself generally function as the other battery terminal' at page 3, line 19-20" Therefore, if the pin was not insulated from the case the pin and the case would short out the battery, rendering an inoperable battery. Because of the teachings presented in the instant disclosure, the insulating element is critical to the operation of the battery and so is required as part of the claimed invention.

Applicant argues Teramoto doesn't teach "an electrode is electrically insulated from the pin but is in electrical communication with a second end cap". As shown in Figures 1 and 2, teach a second electrode that is separated electrically from the pin is in electrical communication with a second end cap (1:10-29).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Walker whose telephone number is 571-272-3458. The examiner can normally be reached on Mon. - Fri. 8am - 5pm.

Application/Control Number:
10/665,509
Art Unit: 1795

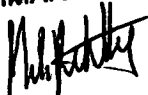
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

K. Walker

MARK RUTHKOSKY
PRIMARY EXAMINER


12.10.07